

BOOK REVIEW

THE FLORA OF VERMONT¹

Much of what the reviewer might say of this new edition of "The Flora of Vermont" can be found in his review of "The Flora of New England" (*Rhodora* 72: 137-141, 1970). In major part the present treatment consists of material, pertaining to Vermont, extracted from the larger work. In respect to the illustrations however which were badly reproduced in the earlier book, much care has been taken and they now are of good quality throughout. Also some illustrations have been added, — spikelets of *Trisetum*, fruits of *Ulmus*, plants of *Arceuthobium*, an inflorescence of *Rumex verticillatus* and leaves and bases of *Antennaria* spp.

In a few instances where several species were grouped together on a page in "The Flora of New England" these pages have been taken over without change in the present work even when, as in the willows, some species do not occur in Vermont. Thus there are illustrations in "The Flora of Vermont" of the following species which are not listed in the text as occurring in that State, *Salix pentandra*, *S. cordata*, *S. herbacea*, *S. arctophila*, *S. arygrocarpa*, *S. coactilis*, *S. glaucophylloides*, *S. cinerea*, *S. viminalis* and *S. Eleagnos*. Although it may be helpful to some Vermont botanists to have photographs of leaves of many extra-territorial species of willows at hand for purposes of comparison it might also lead to confusion. Some indeed might be led to believe that all of these exotics are bona fide residents of Vermont. The same inconsistency, if it may be called that, holds for the genus *Crataegus* where again the seven pages of illustrations of the thirty eight species that Seymour recognized in all New England, have been trans-

¹The Flora of Vermont. A manual for the identification of all vascular plants including ferns and flowering plants growing without cultivation in Vermont, fourth edition. Agricultural Station Bulletin 660, the University of Vermont, Burlington, Vermont, 1969 ix + 393 pp. illus.

planted over into the Vermont book. Since, for Vermont, Seymour admits only thirty species, there are eight illustrated species that really don't belong. This admittedly is only one of many frustrations that will arise anyway in the identification of *Crataegus*. However because many of the illustrations were photographs taken of type material, Seymour's handling of this difficult group may be a step forward in clarifying the local species.

Though this reviewer can find no mention of the fact in the several pages of introductory material, it is quite apparent that the Vermont Flora has been taken pretty much out of the earlier "Flora of New England". Except for the convenience of a smaller book (393 as against 596 pages) the greater ease of finding one's way to information about Vermont and the lower purchase price one might therefore argue that the volume should have been delayed for a few years until the investigation of the Vermont flora stimulated by the publication of the New England Flora had resulted in so much new information that a Vermont treatment would be indeed a scientific contribution in itself. Actually however there are many minor changes throughout — additional townships or counties recorded for example and on pages 382 and 383 a considerable list of additions and corrections of which the reader should be aware. Considerable help in the refinement of data was given by Prof. W. Countryman and the late Leopold Charette whose help is duly acknowledged by the author. The final result is therefore considerably improved over the Vermont material in "The New England Flora".

Some effects of haste are to be noted. It should be unnecessary to repeat Vt. for each taxon each time localities of collections are given. In the genus *Betula* there is apparently an omission of *B. borealis* from that part of the treatment which deals with locality data although the species is given in the key. Also there is some mixup in the numbers assigned to the species in the key and farther along in the treatment of *Betula*.

Nomenclatural changes made in the "Flora" are given on page 382. It was the strict policy of Professor M. L. Fernald to publish nomenclatural changes in *Rhodora* rather than in a "manual". This was done before the 7th and 8th editions of Gray's Manual appeared. Although indexing is now better perfected and there is certainly less chance of missing such changes it would still be better communication to publish this kind of material in a Journal.

A final criticism should be made that has nothing to do with the body of the work. However on p. v of the Introduction there are some entirely misleading and incorrect statistics provided by means of which Mr. Seymour demonstrates that Vermont supports nearly five times as much variety as New England as a whole. It isn't necessary for an able taxonomist to be a competent statistician but someone should have caught this before it got into print. The same application of logic could be used to show that any area much smaller than New England would have greater variety than New England as a whole. Already certain persons in Vermont's sister state of New Hampshire are disturbed about the faulty line of reasoning. Actually New Hampshire with nearly the same area as Vermont probably has about as many species and therefore also by the formula given on p. v would have five times as much variety as New England as a whole. The only fair comparison, of course, would be to rate Vermont against other areas of about equal size. In any event it isn't likely that any other part of New England will permit Mr. Seymour for very long to escape with such a patent error.

The *Flora of Vermont* is a scholarly taxonomic work and will have value in educational institutions where students are made aware of its shortcomings and should, of course, find its way into the hands of anyone interested in the plants of Vermont. As a source of information about Vermont flora it is a major step forward from the 3rd edition. Indeed it was the demand for a new edition which hurried the publication of the present work.

One final word about New England State Floras. There is available at present a flora of New England. It is a very valuable and useful book and satisfies a long felt need though it may have some inadequacies in terms of providing information at the state level. There is a drive on at present to prepare new state floras within the New England area sparked by the Seymour Vermont Flora. Writing as a scientifically oriented critic this reviewer urges any who are planning such ventures to go well beyond the Seymour pattern in providing detailed information which will be of use to scholars and scientists. This is not said to disparage the present flora but only to promote improvement.

A. R. HODGDON
UNIVERSITY OF NEW HAMPSHIRE
DURHAM 03824